SAMSUNG TECHWIN

SALES NETWORK

• **SAMSUNG TECHWIN CO., LTD.**
Samsungtechwin R&D Center, 701, Sampyeong-dong, Bundang-gu, Seongnam-si, Gyeonggi-do, Korea, 463-400
TEL : +82-70-7147-8740~60 FAX : +82-31-8018-3745

• **SAMSUNG TECHWIN AMERICA Inc.**
100 Challenger Rd. Suite 700 Ridgefield Park, NJ 07660
Toll Free : +1-877-213-1222 Direct : +1-201-325-6920
Fax : +1-201-373-0124
www.samsungcctvusa.com

• **SAMSUNG TECHWIN EUROPE LTD.**
Samsung House, 1000 Hillswood Drive, Hillswood Business Park
Chertsey, Surrey, UNITED KINGDOM KT16 0PS
TEL :+44-1932-45-5300, FAX : +44-1932-45-5325

www.samsungtechwin.com
www.samsungsecurity.com

PT01-001036A

Caution

THIS EQUIPMENT HAS BEEN TESTED AND FOUND TO COMPLY WITH THE LIMITS FOR A CLASS A DIGITAL DEVICE, PURSUANT TO PART 15 OF FCC RULES. THESE LIMITS ARE DESIGNED TO PROVIDE REASONABLE PROTECTION AGAINST HARMFUL INTERFERENCE WHEN THE EQUIPMENT IS OPERATED IN A COMMERCIAL ENVIRONMENT.
THIS EQUIPMENT GENERATES, USES, AND CAN RADIATE RADIO FREQUENCY ENERGY AND, IF NOT INSTALLED AND USED IN ACCORDANCE WITH THE INSTRUCTION MANUAL, MAY CAUSE HARMFUL INTERFERENCE TO RADIO COMMUNICATIONS. OPERATION OF THIS EQUIPMENT IN A RESIDENTIAL AREA IS LIKELY TO CAUSE HARMFUL INTERFERENCE IN WHICH CASE THE USER WILL BE REQUIRED TO CORRECT THE INTERFERENCE AT HIS OWN EXPENSE.

IC COMPLIANCE NOTICE

THIS CLASS A DIGITAL APPARATUS MEETS ALL REQUIREMENTS OF THE CANADIAN INTERFERENCE.-CAUSING EQUIPMENT REGULATIONS OF ICES-003.

Correct Disposal of This Product (Waste Electrical & Electronic Equipment)

(Applicable in the European Union and other European countries with separate collection systems)

This marking on the product, accessories or literature indicates that the product and its electronic accessories (e.g. charger, headset, USB cable) should not be disposed of with other household waste at the end of their working life. To prevent possible harm to the environment or human health from uncontrolled waste disposal, please separate these items from other types of waste and recycle them responsibly to promote the sustainable reuse of material resources.
Household users should contact either the retailer where they purchased this product, or their local government office, for details of where and how they can take these items for environmentally safe recycling.
Business users should contact their supplier and check the terms and conditions of the purchase contract.
This product and its electronic accessories should not be mixed with other commercial wastes for disposal.

Correct disposal of batteries in this product

(Applicable in the European Union and other European countries with separate battery return systems.)

This marking on the battery, manual or packaging indicates that the batteries in this product should not be disposed of with other household waste at the end of their working life. Where marked, the chemical symbols Hg, Cd or Pb indicate that the battery contains mercury, cadmium or lead above the reference levels in EC Directive 2006/66. If batteries are not properly disposed of, these substances can cause harm to human health or the environment.
To protect natural resources and to promote material reuse, please separate batteries from other types of waste and recycle them through your local, free battery return system.

SAMSUNG TECHWIN

Weatherproof IR Camera

User Manual

SCO-1020R

CE

SAMSUNG

CAUTION

RISK OF ELECTRIC SHOCK.DO NOT OPEN

CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK) NO USER SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

THIS SYMBOL INDICATES THAT DANGEROUS VOLTAGE CONSISTING A RISK OF ELECTRIC SHOCK IS PRESENT WITHIN THIS UNIT.

THIS EXCLAMATION POINT SYMBOL IS INTENDED TO ALERT THE USER TO THE PRESENCE OF IMPORTANT OPERATING AND MAINTENANCE (SERVICING) INSTRUCTIONS IN THE LITERATURE ACCOMPANYING THE APPLIANCE.

WARNING

• TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.
• TO PREVENT INJURY, THIS APPARATUS MUST BE SECURELY ATTACHED TO THE FLOOR/WALL IN ACCORDANCE WITH THE INSTALLATION INSTRUCTIONS.

WARNING

1. BE SURE TO USE ONLY THE STANDARD ADAPTER THAT IS SPECIFIED IN THE SPECIFICATION SHEET. USING ANY OTHER ADAPTER COULD CAUSE FIRE, ELECTRICAL SHOCK, OR DAMAGE TO THE PRODUCT.
2. INCORRECTLY CONNECTING THE POWER SUPPLY OR REPLACING BATTERY MAY CAUSE EXPLOSION, FIRE, ELECTRIC SHOCK, OR DAMAGE TO THE PRODUCT.
3. DO NOT CONNECT MULTIPLE CAMERAS TO A SINGLE ADAPTER. EXCEEDING THE CAPACITY MAY CAUSE ABNORMAL HEAT GENERATION OR FIRE.
4. SECURELY PLUG THE POWER CORD INTO THE POWER RECEPTACLE. INSECURE CONNECTION MAY CAUSE FIRE.
5. WHEN INSTALLING THE CAMERA, FASTEN IT SECURELY AND FIRMLY. THE FALL OF CAMERA MAY CAUSE PERSONAL INJURY.
6. DO NOT PLACE CONDUCTIVE OBJECTS (E.G. SCREWDRIVERS, COINS, METAL PARTS, ETC.) OR CONTAINERS FILLED WITH WATER ON TOP OF THE CAMERA. DOING SO MAY CAUSE PERSONAL INJURY DUE TO FIRE, ELECTRIC SHOCK, OR FALLING OBJECTS.
7. DO NOT INSTALL THE UNIT IN HUMID, DUSTY, OR SOOTY LOCATIONS. DOING SO MAY CAUSE FIRE OR ELECTRIC SHOCK.
8. IF ANY UNUSUAL SMELLS OR SMOKE COME FROM THE UNIT, STOP USING THE PRODUCT. IN SUCH CASE, IMMEDIATELY DISCONNECT THE POWER SOURCE AND CONTACT THE SERVICE CENTER. CONTINUED USE IN SUCH A CONDITION MAY CAUSE FIRE OR ELECTRIC SHOCK.
9. IF THIS PRODUCT FAILS TO OPERATE NORMALLY, CONTACT THE NEAREST SERVICE CENTER. NEVER DISASSEMBLE OR MODIFY THIS PRODUCT IN ANY WAY. (SAMSUNG IS NOT LIABLE FOR PROBLEMS CAUSED BY UNAUTHORIZED MODIFICATIONS OR ATTEMPTED REPAIR.)
10. WHEN CLEANING, DO NOT SPRAY WATER DIRECTLY ONTO PARTS OF THE PRODUCT. DOING SO MAY CAUSE FIRE OR ELECTRIC SHOCK.

CAUTION

1. DO NOT DROP OBJECTS ON THE PRODUCT OR APPLY STRONG BLOWS TO IT. KEEP AWAY FROM A LOCATION SUBJECT TO EXCESSIVE VIBRATION OR MAGNETIC INTERFERENCE.
2. DO NOT INSTALL IN A LOCATION SUBJECT TO HIGH TEMPERATURE (OVER 55°), LOW TEMPERATURE (BELOW -10°), OR HIGH HUMIDITY. DOING SO MAY CAUSE FIRE OR ELECTRIC SHOCK.
3. IF YOU WANT TO RELOCATE THE ALREADY INSTALLED PRODUCT, BE SURE TO TURN OFF THE POWER AND THEN MOVE OR REINSTALL IT.
4. REMOVE THE POWER PLUG FROM THE OUTLET WHEN THERE IS A LIGHTING STORM. NEGLECTING TO DO SO MAY CAUSE FIRE OR DAMAGE TO THE PRODUCT.
5. KEEP OUT OF DIRECT SUNLIGHT AND HEAT RADIATION SOURCES. IT MAY CAUSE FIRE.
6. INSTALL IT IN A PLACE WITH GOOD VENTILATION.
7. AVOID AIMING THE CAMERA DIRECTLY TOWARDS EXTREMELY BRIGHT OBJECTS SUCH AS SUN, AS THIS MAY DAMAGE THE CCD IMAGE SENSOR.
8. APPARATUS SHALL NOT BE EXPOSED TO DRIPPING OR SPLASHING AND NO OBJECTS FILLED WITH LIQUIDS, SUCH AS VASES, SHALL BE PLACED ON THE APPARATUS.
9. THE MAINS PLUG IS USED AS A DISCONNECT DEVICE AND SHALL STAY READILY OPERABLE AT ANY TIME.
10. DO NOT EXPOSE THE CAMERA TO RADIOACTIVITY. RADIOACTIVITY EXPOSURE MAY DAMAGE THE CCD.

FCC STATEMENT

THIS DEVICE COMPLIES WITH PART 15 OF THE FCC RULES. OPERATION IS SUBJECT TO THE FOLLOWING TWO CONDITIONS :

1) THIS DEVICE MAY NOT CAUSE HARMFUL INTERFERENCE, AND

2) THIS DEVICE MUST ACCEPT ANY INTERFERENCE RECEIVED INCLUDING INTERFERENCE THAT MAY CAUSE UNDESIRED OPERATION.

Important Safety Instructions

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this apparatus near water.
6. Clean only with dry cloth.
7. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
8. Do not install near any heat sources such as radiators, heat registers, or other apparatus (including amplifiers) that produce heat.
9. Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong is provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
10. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
11. Only use attachments/accessories specified by the manufacturer.
12. Use only with cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus.
13. Unplug this apparatus when a card is used. Use caution when moving the cart/ apparatus combination to avoid injury from tip-over.
14. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as powersupply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

Apparatus shall not be exposed to dripping or splashing and no objects filled with liquids, such as vases, shall be placed on the apparatus

eco RoHS compliant

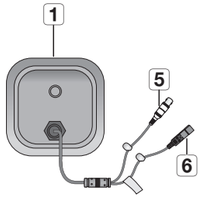
Samsung Techwin cares for the environment at all product manufacturing stages to preserve the environment, and is taking a number of steps to provide customers with more environment-friendly products.The Eco mark represents Samsung Techwin's will to create environment-friendly products, and indicates that the product satisfies the EU RoHS Directive.

Component Names and Functions

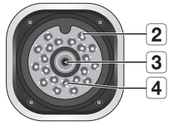
Equipped with the IR LED and the illumination sensor, enables you to monitor at night as well as in daytime.

The camera is suitable for both internal and external use.

Bottom



Front



	Name	Description
1	Camera Fitting Groove	Groove that is used to fit the camera bracket. There are two grooves; one on the top and one on the bottom.
2	IR LED	These infrared LED's are controlled by the illumination sensor.
3	Lens	Focal length of 3.6mm enables you to cover relatively longer range of monitoring.
4	Illumination Sensor	Detects incoming light to control the IR LED.

5	Video output Jack	Video signals are output through this port. Connect this port to the Video IN port of a monitor.
6	Power Input Terminal	Connect the power as specified for each model here.

Accessories

User Manual

Quick Set-up Guide

SCO-1020R

Screw 3EA

Camera Bracket

Installation

Installing Camera

The camera can be installed on the wall, ceiling, shelf or a desired position using the provided bracket.

1. Select a position where you want to install the camera.
   ▪ Make sure the selected position can sustain the weight of the camera.
2. Use the screw bolts (M4 X L15) to mount the camera bracket onto the wall or ceiling.
3. Place the camera on the selected position and fit the hole either on the top or the bottom of the camera into the fixing bolt of the bracket, and turn the camera clockwise.

▪ You should be careful when installing the camera outdoors becausethe cable connectors may be wet with moisture or pile up with impurities.

Camera Bracket

- The camera bracket can be used to install the camera on the wall, ceiling or shelf.

Camera Bracket Specification

Name	Description
Installation	Wall or Ceiling
Dimensions	57(W) x 47.2(H) x 100.5(L) mm/ 2.25(W) x 1.86(H) x 3.95(L) inch
Weight	130g (0.29 lbs)
Operating Temperature	-10℃ ~ 55℃ (14℉ ~ 131℉)
Accessories	SCREW (M4 X L15) : 3 pcs

Adjusting the Camera Bracket

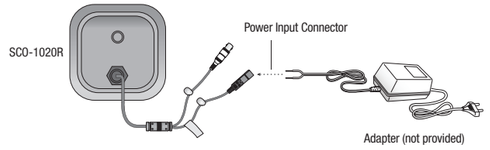
1. Choose an installation site that can sufficiently support the weight of the equipments to be installed.
2. Attach the camera bracket to the wall using the supplied screws (M4 X L15). 4x15 sized screws wall or ceiling.

3. Adjust the camera to target the video location and tighten the camera bracket handle on the camera bracket. Install the camera on to the male screw of the camera bracket by rotating the camera clockwise.

4. Loosen the handle by turning it counter clockwise and then adjust the camera position. Tighten the handle, turning it clockwise to lock the camera in position.
5. Connect the camera cable to the camera.

Connecting to Power

- Connect the adapter to the power input connector as shown in the figure below. Use a DC 12V. (The Adapter is not provided with the Camera.)



For DC Power Type

Resistance of copper wire [at 20C°(68°F)]

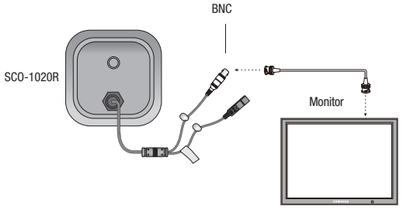
Copper wire size (AWG)	#24(0.22mm²)	#22(0.33mm²)	#20(0.52mm²)	#18(0.83mm²)
Resistance (Ω / m)	0.078	0.050	0.030	0.018
Voltage Drop (V/m)	0.028	0.018	0.011	0.006

- As the voltage drop according to the length of the cable in the above table, a camera may malfunction if there is an excessively long cable run.
  * Voltage for camera operation: DC 12V±10%
  * Voltage drops in the above table are variable according to types of cable manufacturer.

Connection to Monitor

Connect the VIDEO-OUT jack to the VIDEO-IN jack of monitor.

- As a connecting method varies according to instruments, refer to the manual supplied with the instrument.
- Connect the cable after power is turned off.



Troubleshooting

If you have trouble operating your camera, refer to the following.
If the guidelines do not enable you to solve the problem, contact an authorized technician.

■ **The image on the screen is dim.**
- Check if the lens are stained. If dirty, clean the lens with soft, clean cloth.
- The image is dimmer at night than daytime. If the focus is not right, adjust it at daytime.

■ **The contrast on the screen is too weak.**
- Adjust the contrast feature of the monitor.
- If the camera is exposed under too strong light, change the camera position.

■ **The camera is not work properly, and the surface of the camera case is hot.**
- Check that you have connected the camera to a proper power (DC 12V±10%).

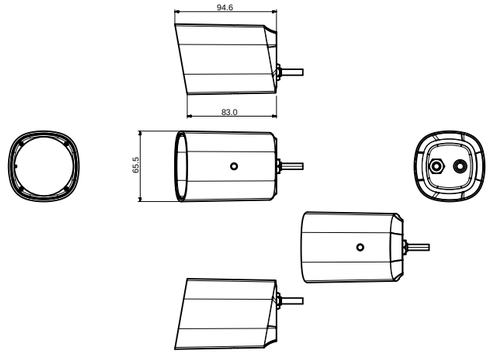
Specification

Item	SCO-1020RN	SCO-1020RP
Video		
Imaging Device	1/4" CMOS	
Total Pixels	680(H) x 512(V)	680(H) x 512(V)
Effective Pixels	720(H) x 480(V)	720(H) x 576(V)
Scanning System	2:1 Interlace	
Synchronization	Internal	
Frequency	H : 15.734KHz V:59.94Hz	H: 15.625KHz V: 50.00Hz
Horizontal Resolution	520 TV lines	
Min. Illumination	0 LUX (IR LED On)	
S/N Ratio	46dB (AGC off, Weight on)	
Video Output	CVBS : 1.0Vp-p, 75Ω composite	
Lens Type		
Focal Length (Zoom Ratio)	3.6mm	
Max. Aperture Ratio	2	
Angular Field of View	H : 56° / V : 42°	
Min. Object Distance	0.2m	
Lens Type	Fixed	
Operational		
Digital Noise Reduction	Auto	
Day & Night	Auto	
Gain Control	Auto	

Specification

Item	SCO-1020RN	SCO-1020RP
Operational		
White Balance	Auto (3,200K° ~ 6,500K°)	
Shutter Mode	Auto (Rolling Shutter)	
IR Distance	15m (IR LED 20 EA)	
Environmental		
Operating Temperature / Humidity	-10°C ~ +55°C (+14°F ~ +131°F) / 0% ~ 90% RH	
Electrical		
Input Voltage/Current	12V DC	
Power Consumption	2.6W	
Mechanical		
Color / Material	White / ADC 12	
Dimension (WxHxD)	W65.5 x H65.5 x D94.6 (2.58 x 2.58 x 3.72 inch)	
Weight	325g	

※ The specification for this product may change without prior notice for product improvement.

Dimension

Unit : mm(Inches)